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(028248-1803)

REMARKS

In accordance with the present invention, there are provided novel cycloaliphatic epoxy compounds and thermosetting resins prepared therefrom. Invention compounds provide resins with desirable characteristics such as, for example, hydrophobicity, high Tg values, ionic purity, hydrolytic stability, and the like. Invention compounds are based on polycyclic hydrocarbon backbones comprising oligomers of the inexpensive and readily available monomer cyclopentadiene. The oligomers may be easily synthesized via Diels-Alder chemistry. Thus, invention compounds also provide economic benefit in addition to their exceptional performance characteristics.

By the present communication, the Specification has been amended to insert a sentence regarding related U.S. application data. The amendment adds no new matter and is supported by the priority claim appearing in the Application Data Sheet originally filed with the application. In addition, Claims 4, 8-13, and 28-34 have been canceled without prejudice. Applicants expressly reserve the right to pursue the subject matter of these claims in a timely filed divisional application. Claim 23 has been amended and Claims 40-44 have been added to define Applicants' invention with greater particularity. No new matter is introduced as the amended and new claim language is fully supported by the specification and original claims. The amendments and new claims are presented in response to issues raised in the Advisory Office Action, and are respectfully submitted to place the application in condition for allowance or, in the alternative, to reduce the issues upon appeal. In particular, because the Examiner indicated that Claims 23-27 would be allowable if submitted in a separate, timely filed amendment, Claims 23-27 are set forth as in Applicants' previous response. Accordingly, entry of the amendment and new claims submitted herewith is respectfully requested. As Claims 35-39 were not entered

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in the Advisory Action, upon entry of the present amendment, Claims 23-27 and 40-44 will be pending.

As a preliminary matter, Applicants acknowledge the Examiner's comments concerning the quality of the structures depicted in the amendment mailed June 5, 2003. Applicants note that in accordance with current rules, a replacement listing of the claims that will be pending upon entry of this amendment is provided herewith. This listing of claims will replace all prior versions and listings of claims in the application, and renders moot any issues with the letter quality of the previous claim set.

It is respectfully submitted that the Examiner's discussion of Applicants' claim of priority (pages 2-4 of the Final Office Action) is misplaced. The Examiner's attention is directed to the Application Data Sheet accompanying the application at the time of filing which properly claims priority as a divisional of U.S. Patent Application No. 09/347,091, filed July 1, 1999. In addition, by the present communication, Applicants have amended the specification to insert a sentence regarding related U.S. application data.

Claims 23-28 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants traverse that rejection.

Applicants respectfully disagree with the Examiner's assertion that "Applicant's remarks regarding Marcus raise questions regarding the language defining 'X'." (Office Action, p. 4.) It is respectfully submitted that the claims are definite as written. Claim 23 clearly states that "X is a trimer or tetramer of optionally substituted cyclopentadiene bearing at least one functional group, or a radical having one of the following structures," and includes structure (XIV). (Emphasis added.) Claim 23 is thus not limited to the depicted structures.

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Applicants further disagree that their earlier assertion that "deleting structure (XIV) from claim 8 distinguishes over Marcus" has any bearing on the definiteness of Claim 23 or claims dependent therefrom. Structure (XIV) is present in Claim 23 and therefore Claim 23 can not depend on the absence of structure (XIV) for patentability. Instead, as set forth below, Claim 23 distinguishes over Marcus at least by requiring a bifunctional monomer including siloxane or aromatic groups as a bridging moiety. The claims remain definite as written. Accordingly, Applicants respectfully request that the rejection of Claims 23-27 under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

Claims 23 and 27 stand rejected under 35 U.S.C. § 102(b), as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over Marcus (U.S. Patent No. 3,455,966). Applicants traverse these rejections.

Claims 23 and 27 each distinguish over Marcus at least by requiring a bifunctional monomer that includes a bridging group Y selected from siloxane or aromatic groups. Marcus fails to disclose such bridging groups. Accordingly, the diepoxides of Marcus lie outside the scope of present Claims 23 and 27.

Further, it is respectfully submitted that the optional alkyl spacer groups of Marcus do not fairly suggest the Y groups (i.e., siloxane and aromatic groups) required by the present claims. Marcus does not recognize the problem of hydrophilicity in thermoset resins that inventive compounds were designed to address and therefore cannot suggest the compounds of Claims 23 or 27. Accordingly, Applicants respectfully submit that Claims 23 and 27 are patentable over Marcus and request reconsideration and withdrawal of the rejections of these claims under 35 U.S.C. § 102(b) or, in the alternative, under 35 U.S.C. § 103(a).

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Claim 23 stands rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over McConnell (U.S. Patent No. 3,297,724). Applicants traverse these rejections.

Claim 23 distinguishes over McConnell at least by requiring a bifunctional monomer including a bridging group Y selected from siloxane or aromatic groups. Because the Office Action acknowledges that no bridging group is present, the compounds set forth by McConnell are clearly outside the scope of present Claim 23. In addition, even if the alkyloxyalkyl spacers of McConnell are considered to be bridging groups, they are not siloxane or aromatic groups. Accordingly, the compounds disclosed by McConnell do not anticipate Claim 23.

Moreover, the alkyloxyalkyl spacers of McConnell do not fairly suggest the Y groups (i.e., siloxanes or aromatic groups) required by the present claims. As with Marcus, McConnell does not even recognize the problem of hydrophilicity in thermoset resins that inventive compounds were designed to address and cannot therefore suggest the compounds of Claim 23. Thus, it is respectfully submitted that Claim 23 is patentable over McConnell. Reconsideration and withdrawal of the rejection of Claim 23 under 35 U.S.C. § 102(b) and, in the alternative, under 35 U.S.C. § 103(a) are respectfully requested.

In the Final Office Action, the Examiner found claim 28 patentable over the cited documents of record. In view of this finding, Applicants have canceled dependent Claim 28 and rewritten it as independent Claim 40 to include all the recitations of previous Claim 23 from which it depended. In particular, Applicants note that Claim 40 requires that at least one of the functional groups on the bifunctional monomer is epoxy and the other functional groups are independently maleimido, norbornyl, cyanate ester, (meth)acrylates, anhydrides, carboxylic acids, amines, amides, sulfides, or polyhydroxy hydrocarbyls. Because Marcus or McConnell are directed to diepoxides, Claim 40 cannot be anticipated by the art of record.

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Applicants have also added new Claims 41-44, which all depend, directly or indirectly, from new Claim 40. As the new claims depend from Claim 40, Applicants respectfully submit that these claims are also patentable over the cited documents of record. Accordingly, Applicants respectfully request allowance of Claims 40-44.

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. If any issues remain to be resolved in view of this response, the Examiner is invited to contact the undersigned at the telephone number set forth below so that a prompt disposition of this application can be achieved.

Respectfully submitted,

Date: November 24, 2003

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